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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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09/930,113

08/15/2001

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5681-04100

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7590

11/02/2006

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EXAMINER

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ART UNIT

PAPER NUMBER

2137

DATE MAILED: 11/02/2006

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**NOV 02 2006**

**Technology Center 2100**

**BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES**

Application Number: 09/930,113  
Filing Date: August 15, 2001  
Appellant(s): KING ET AL.

Noel Kivlin  
Attorney  
For Appellant

**EXAMINER'S ANSWER**

This is in response to the appeal brief filed 7/25/2006 appealing from the Office action  
mailed 2/15/2006.

**(1) Real Party in Interest**

A statement identifying by name the real party in interest is contained in the brief.

**(2) Related Appeals and Interferences**

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

**(3) Status of Claims**

The statement of the status of claims contained in the brief is correct.

**(4) Status of Amendments After Final**

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

**(5) Summary of Claimed Subject Matter**

The summary of claimed subject matter contained in the brief is correct.

**(6) Grounds of Rejection to be Reviewed on Appeal**

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

**(7) Claims Appendix**

The copy of the appealed claims contained in the Appendix to the brief is correct.

**(8) Evidence Relied Upon**

Merrien (PCT No. WO9857474), Walters (U.S. Patent 5,357,573), Hellman (U.S. Patent 4,200,770), Braithwaite (U.S. Patent 5,644,444), Combaluzier (U.S. Patent 5,973,475), Teppler (U.S. Patent 6,792,536), Hastings (U.S. Patent 5,460,441), and Windows NT Server (MacDonald, D., "Windows NT Server, Microsoft Windows NT 5.0 TCP/IP Implementation Details TCP/IP Protocol Stack and Services", 10/1998, obtained from <http://asg.web.cmu.edu/orpheus/msdocs/wp/nt5tcpip.doc>).

**(9) Grounds of Rejection**

The following ground(s) of rejection are applicable to the appealed claims:

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 4, 10, 13, 15, 20, 23, 25, 26, 29, and 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Merrien (PCT No. WO9857474) in view of Walters (U.S. Patent 5,357,573).

Regarding Claim 1,

Merrien discloses a processing unit connectable to a data communications network, the processing unit having a device reader (Page 8, line 34 to Page 9, line 4) for a portable storage device that

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includes storage operable to supply a network identity (Page 9, lines 18-23) for the processing unit and an access controller (Page 10, lines 16-28), the access controller being operable to prevent unauthorized reading and writing to the storage (Page 10, lines 16-28), the processing unit being operable to read the supplied network identity only after authentication has taken place (Page 10, lines 16-28). Merrien does not disclose the method of first attempting to write to the storage device and, only once the write has failed, to read the network identity.

Walters, however, discloses that the processing unit is operable, before reading from the portable storage device, to attempt a write to the portable storage device, and, on determining that the write has failed, to read a protection code, authorizing the reading of data on the card (Column 4, line 62 to Column 5, line 51). It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to incorporate the memory card of Walters into the smart card system of Merrien in order to verify that the card input to the system was an approved card that could be used with the system.

Regarding Claim 10,

Claim 10 is a program claim that corresponds to system claim 1 and is rejected for the same reasons.

Regarding Claim 15,

Claim 15 is a program on carrier medium claim that corresponds to system claim 1 and is rejected for the same reasons.

Regarding Claim 20,

Claim 20 is a method claim that corresponds to system claim 1 and is rejected for the same reasons.

Regarding Claim 25,

Claim 25 is a system claim that is broader than system claim 1 and is rejected for the same reasons.

Regarding Claim 26,

Claim 26 is a system claim that is broader than system claim 1 and is rejected for the same reasons.

Regarding Claim 4,

Merrien as modified by Walters discloses the system of claim 1, in addition, Merrien discloses that the portable storage device is a smart card (Page 8, line 34 to Page 9, line 4), the access controller is a microcontroller (Page 12, lines 5-14), and the device reader is a smart card reader (Page 8, line 34 to Page 9, line 4; and Page 9, line 24 to Page 10, line 2).

Regarding Claim 13,

Claim 13 is a program claim that corresponds to system claim 4 and is rejected for the same reasons.

Regarding Claim 23,

Claim 23 is a method claim that corresponds to system claim 4 and is rejected for the same reasons.

Regarding Claim 30,

Claim 30 is a system claim that is broader than system claim 4 and is rejected for the same reasons.

Regarding Claim 29,

Merrien as modified by Walters discloses the device of claim 25, in addition, Merrien discloses that the access controller is a microcontroller (Page 12, lines 5-14).

Claims 2, 11, and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Merrien in view of Walters, further in view of Braithwaite (U.S. Patent 5,644,444).

Regarding Claim 2,

Merrien as modified by Walters discloses the system of claim 1, in addition, Merrien discloses copying the supplied network identity from a data carrier to a second memory location and to use the supplied network identity (Page 9, lines 18-23; and Page 10, lines 16-28). Walters discloses attempting a write to the storage of the portable storage device, and on determining that the write has failed, to copy data from the portable storage device (Column 4, line 62 to Column 5, line 21). Merrien as modified by Walters does not disclose the detection of a portable storage device upon powering up of the processing unit.

Braithwaite, however, discloses that the processing unit is operable, on being powered up, to determine whether a said portable storage device is present in the device reader (Column 9, lines 30-41). It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to incorporate the write protection scheme of Braithwaite into the smart card system of Merrien as modified by Walters in order to properly detect a portable storage device so as to continue operations without delay.

Regarding Claim 11,

Claim 11 is a program claim that corresponds to system claim 2 and is rejected for the same reasons.

Regarding Claim 21,

Claim 21 is a method claim that corresponds to system claim 2 and is rejected for the same reasons.

Claims 3, 12, 22, 27, and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Merrien in view of Walters, further in view of Hellman (U.S. Patent 4,200,770).

Regarding Claim 3,

Merrien as modified by Walters discloses the system of claim 1, in addition, Merrien discloses that the processing unit is operable to modify content of the portable storage device on the condition that proper



authentication and encryption have taken place (Page 10, lines 16-28), but Merrien as modified by Walters does not disclose key exchange or key-to-key encryption.

Hellman, however, discloses key-to-key encryption (Column 8, line 65 to Column 9, line 25) and a key exchange method comprising a transmitter that supplies a key to a receiver (Column 9, lines 7-8), and, in response to receipt of a return key from the receiver (Column 9, lines 9-10), to send an encrypted message to the receiver (Column 9, lines 20-23). It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to incorporate the key exchange and encryption schemes of Hellman into the smart card system of Merrien as modified by Walters because Merrien discloses that any convenient or conventional encryption scheme may be used in the system (the techniques of Diffie and Hellman being quite well known at the time the invention was made) (Merrien, Page 18, line 26 to Page 19, line 22).

Regarding Claim 12,

Claim 12 is a program claim that corresponds to system claim 3 and is rejected for the same reasons.

Regarding Claim 22,

Claim 22 is a method claim that corresponds to system claim 3 and is rejected for the same reasons.

Regarding Claim 27,

Claim 27 is a system claim that is broader than system claim 3 and is rejected for the same reasons.

Regarding Claim 28,

Merrien as modified by Walters and Hellman discloses the system of claim 27, in addition, Merrien discloses that the access controller is subsequently operable to respond to an encrypted command from the processing unit to modify the content of the storage in the portable storage device (Page 10, lines 16-28).

Claims 5, 14, 24, and 31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Merrien in view of Walters, further in view of Windows NT Server (MacDonald, D., "Windows NT Server, Microsoft Windows NT 5.0 TCP/IP Implementation Details TCP/IP Protocol Stack and Services", 10/1998, obtained from <http://asg.web.cmu.edu/orpheus/msdocs/wp/nt5tcpip.doc>).

Regarding Claim 5,

Merrien as modified by Walters does not disclose a MAC address.

Windows NT Server, however, discloses that the network identity comprises a MAC address (Page 12, Paragraphs 2 and 3). It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to incorporate the ARP protocol of Windows NT Server into the smart card system of Merrien as modified by Walters in order to obtain a

(physical) MAC address of a computer from the (logical) IP address of that computer.

Regarding Claim 14,

Claim 14 is a program claim that corresponds to system claim 5 and is rejected for the same reasons.

Regarding Claim 24,

Claim 24 is a method claim that corresponds to system claim 5 and is rejected for the same reasons.

Regarding Claim 31,

Claim 31 is a system claim that is broader than system claim 5 and is rejected for the same reasons.

Claims 6, 7 and 16-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Merrien in view of Walters, further in view of Combaluzier (U.S. Patent 5,973,475).

Regarding Claim 6,

Merrien as modified by Walters discloses the system of claim 1, in addition, Merrien discloses that the processing unit comprises circuitry to allow the processing unit to control functions of the processing unit (Page 9, lines 11-17), but does not disclose that the circuitry is a service processor.

Combaluzier, however, discloses that the processing unit comprises a service processor, the service processor being programmed to control reading of the portable storage device (Column 4, lines 22-33). It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to incorporate the cellular telephone of Combaluzier into the smart card system of Merrien as modified by Walters in order to identify the user and authorize the use of the cellular telephone, as well as perform any needed transferring of data between the portable storage device and the processing unit (Column 4, lines 34-55).

Regarding Claim 16,

Claim 16 is a program claim that corresponds to system claim 6 and is rejected for the same reasons.

Regarding Claim 7,

Merrien as modified by Walters and Combaluzier discloses the system of claim 6, in addition, Combaluzier discloses that the service processor is a microcontroller (Column 4, lines 22-33).

Regarding Claim 17,

Claim 17 is a program claim that corresponds to system claim 7 and is rejected for the same reasons.

Regarding Claim 18,

Merrien as modified by Walters discloses the program of claim 10, but does not disclose that this program is run on a microcontroller.

Combaluzier, however, discloses that the microcontroller controls the operations of the processing unit (Column 4, lines 22-33). It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to incorporate the cellular telephone of Combaluzier into the smart card system of Merrien as modified by Walters in order to identify the user and authorize the use of the cellular telephone, as well as perform any needed transferring of data between the portable storage device and the processing unit (Column 4, lines 34-55).

Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Merrien in view of Walters, further in view of Teppler (U.S. Patent 6,792,536).

Merrien as modified by Walters does not disclose that the processing unit is a server computer.

Teppler, however, discloses that the processing unit is a server computer (Column 14, lines 32-37; and Column 20, lines 7-18). It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to incorporate the smart card system of Teppler into the smart card system of Merrien as modified by Walters in order to provide much interoperability and to ensure that secure messaging is done within a protected server security perimeter.

Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Merrien in view of Walters, further in view of Hastings (U.S. Patent 5,460,441).

Merrien as modified by Walters does not disclose that the processing unit is a rack mountable computer server.

Hastings, however, discloses that the processing unit is a rack mountable computer server (Column 3, line 48 to Column 4, line 17). It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to incorporate the server rack system of Hastings into the smart card system of Merrien as modified by Walters in order to have the server(s) disposed in a unique manner so as to provide substantially improved access thereto.

Claim 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over Merrien in view of Walters and Combaluzier, further in view of Teppler.

Merrien as modified by Walters and Combaluzier discloses the microcontroller comprising a control program as in claim 18, in addition, Combaluzier discloses that the microcontroller is operable as a service processor and connected to read the content of storage in a portable storage device mounted in the portable storage device (Column 4, lines 22-33). Merrien as modified by Walters and Combaluzier does not disclose that the processing unit is a server computer.

Teppler, however, discloses that the processing unit is a server computer (Column 14, lines 32-37; and Column 20, lines 7-18). It would have been

obvious to one of ordinary skill in the art at the time of applicant's invention to incorporate the smart card system of Teppler into the smart card system of Merrien as modified by Walters and Combaluzier in order to provide much interoperability and to ensure that secure messaging is done within a protected server security perimeter.

#### **(10) Response to Argument**

Appellant argues, with respect to claim 1, that there is no suggestion or motivation to combine the references (referring to Merrien in view of Walters). This motivation ("to verify that the card input to the system was an approved card that could be used with the system") is, indeed, found in Walters. Column 2, lines 31-35 describe how only the proper (approved) memory card can be used for a particular application in that "Also if the protected program is copied to another memory card, it is not executable, as the comparison code contained within the protection routine does not concur with the protection code on the new memory card." Column 2, line 60 to Column 3, line 3 describe how it is verified that the card is an approved card that can be used with the system, in that "The program to be protected contains a special protection routine, which accesses the protection code and only executes the application program if the protection code is read correctly, i.e. when an authorised memory card is used." Such motivation is found in other portions of Walters as well.

Appellant also argues, with respect to claim 1, that there is no teaching either in the references cited or the prior art to show how to combine the elements of Merrien with the elements of Walters to produce the claimed invention. This is seen throughout Walters. Column 5, lines 18-21 describe the protection routine as first attempting a write to the area of memory that includes the protection code, and subsequently reading the protection code when the write fails, in that "This routine will initially attempt to write to this memory area. When this does not succeed the protection code will be read to guarantee that it is dealing with a functional protection code." Column 2, line 67 to Column 3, as quoted above, show how a program will be read and executed from the memory card only when the protection routine has completed correctly. Column 1, lines 62-66, for example, teach that any data can be stored on the memory card, read, and used once the memory card is found to be authorised, in that "It is an object of the present invention to provide a memory card for PCs which protects against unauthorised copying of data and programs saved on the memory card and which also prevents unauthorised use of such data and programs." As is clear from these sections, as well as others, the protection routine will first be performed (attempting a write to the protection code area of memory and subsequent reading and authorising of said protection code), and only upon completion of this protection routine indicating that the memory card (and possibly device/reader, as shown in Column 4, line 62 to Column 5, line 9) is an authorised memory card will reading of data stored on the memory card be allowed to proceed. The data that is read after the card is determine to be authorised



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comprises the data stored on the memory card in Merrien, being at least a network identity (address).

Appellant also argues, with respect to claim 1, that Merrien and Walters teach away from each other in that the protection code of Walters is strictly for internal use to ensure that copying or use of software is authorised and, by making this code public, such as by using it as a network identity, would jeopardize the security of the code and thus undermine the security scheme disclosed by Walters. If the combination of Merrien in view of Walters used the network identity (of Merrien) as the protection code (of Walters), perhaps there would be basis for this argument. However, as stated multiple times previously, the network identity and protection code are entirely separate pieces of data stored in different locations of the storage device. The only conclusion that the examiner can come to regarding this argument remaining is that appellant believes the claims to recite that the network identity is stored within the region of storage for which a write is attempted. This is not the case, however, since none of the claims include such a limitation. What the claims require is that the storage device stores a network identity, an attempt to write to the storage of the storage device is performed and, if this write has failed, the network identity is read. As described above, below, and in previous responses, the protection code and routine of Walters is used to verify that the memory card is an authorised one, and only once the authorisation routine has completed successfully (indicating an authorised memory card) will access to other data stored on the card be allowed (other data being at least the address of Merrien).

Appellant also argues, with respect to claim 1, that there is no teaching or suggestion in Walters that verification of the protection code permits the reading of arbitrary data (i.e., data other than the executed software, such as the network identity of Merrien) from the card. As seen throughout Walters, verification of the protection code (and, thus, authorisation of the memory card) allows the reading of arbitrary data from the card. Column 1, lines 62-66, for example, teach this in that "It is an object of the present invention to provide a memory card for PCs which protects against unauthorised copying of data and programs saved on the memory card and which also prevents unauthorised use of such data and programs." As can clearly be seen by this section, Walters protects against unauthorised copying and use of data and programs. Column 2, lines 8-12 of Walters explicitly teaches that the protection code is used to prevent unauthorised use of data, in that "By means of a non-changeable and read-only protection code contained or stored in the memory card a reliable protection against unauthorised use of programs and data stored in the memory card is guaranteed." Claim 1 of Walters also teaches that the memory contains data as well as programs: "read-write memory means for storing data and application programs".

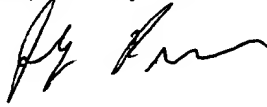
Regarding claims 2-31, appellant has provided no additional arguments other than reliance on those used with respect to claim 1.

#### **(11) Related Proceeding(s) Appendix**

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.


For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,



Jeff Popham

Conferees:

Kim Vu 

Kambiz Zand

  
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PRIMARY EXAMINER